AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A charge transport organic material comprising <u>an electron</u> <u>accepting dopant substance or a hole accepting dopant substance</u>, and a compound of the general formula (1) having a 1,4-dithiin ring

$$R^{1} \xrightarrow{X}_{p} \begin{bmatrix} S & & & \\ &$$

wherein R^1 , R^2 , R^3 and R^4 independently represent hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group, an organooxy group, an organoamino group, an organosilyl group, an organothio group, an acyl group or a sulfone group, X and Y independently represent at least one member of substituted or unsubstituted, divalent conjugated units selected from aniline, thiophene, furan, pyrrole, ethynylene, vinylene, phenylene, naphthalene, anthracene, imidazole, oxazole, oxadiazole, quinoline, quinoxaline, pyridine, pyrimidine, pyrazine, phenylenevinylene, fluorene, carbazole, triarylamines, metal or metal-free phthalocyanine, and metal or metal-free porphyrin, two sulfur atoms contained in the dithiin ring may independently be <u>in</u> the form of an SO group or an SO_2 group, and P and P independently represent 0 or an integer of 1 or over, P0 represents an integer of 1 or over, provided that P1 and P2 is satisfied.

2. (Canceled)

3. (Currently Amended) The charge transport organic material according to elaim $\frac{1 \text{ or } 2 \text{ claim } 1}{1 \text{ or } 2 \text{ claim } 1}$, wherein p, q and r in the general formula (1) satisfies that $3 \le p + q + r \le 10$.

Docket No.: 0171-1271PUS1

- 4. (Previously Presented) A charge transport varnish comprising a charge transport organic material of claim 1 and a solvent.
- 5. (Original) A charge transport thin film prepared by use of the charge transport varnish defined in claim 4.
- 6. (Original) An organic electroluminescent element comprising the charge transport thin film defined in claim 5.
- 7. (Withdrawn) A method for preparing a compound having a 4-dithiin ring and represented by the formula (1) indicated hereinbelow, comprising:

the first step of reacting, in the presence of an acid catalyst, a compound of the formula
(2)

$$R^{1} - \left[X \right]_{p} H \qquad (2)$$

R¹ hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group or an organooxy group, X represents at least one member of substituted or unsubstituted, divalent conjugated units selected from aniline, thiophene, furan, pyrrole, ethynylene, vinylene, phenylene, naphthalene, anthracene, imidazole, oxazole, oxadiazole, quinoline, quinoxaline, pyridine, pyrimidine, pyrazine, phenylenevinylene, fluorene, carbazole, triarylamines, metal or

After Final Office Action of April 1, 2009

metal-free phthalocyanine, and metal or metal-free porphyrin, and p is an 0 or an integer of 1 or over,

or a compound of the formula (3)

$$R^2 - \left[Y - \right]_{\Gamma} H \qquad (3)$$

wherein R² hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group or an organooxy group, Y represents at least one member of substituted or unsubstituted, divalent conjugated units selected from aniline, thiophene, furan, pyrrole, ethynylene, vinylene, phenylene, naphthalene, anthracene, imidazole, oxazole, oxadiazole, quinoline, quinoxaline, pyridine, pyrimidine, pyrazine, phenylenevinylene, fluorene, carbazole, triarylamines, metal or metal-free phthalocyanine, and metal or metal-free polyphyrin, and r is an 0 or an integer of 1 or over, and

an acid halide represented by the formula (4)

$$\begin{array}{c} O \\ Hal^{1} \\ \hline CH_{2} \\ \hline Hal^{2} \end{array} \qquad (4)$$

wherein Hal represents a halogen atom, thereby preparing an acyl compound represented by the formula (5)

$$R^{1} - \left[X - \right]_{D}^{O} CH_{2} - Hal^{2}$$
 (5)

Application No. 10/577,438 After Final Office Action of April 1, 2009

wherein R¹, X, p and Hal, respectively, have the same meanings as defined above, or the formula
(6)

$$R^{2} - \left[Y \right]_{r}^{O} CH_{2} - Hal^{2}$$
 (6)

wherein R², Y, r and Hal, respectively, have the same meanings as defined above;

the second step of subsequently reacting the acyl compound represented by the formula (5), the acyl compound represented by the formula (6) and an alkali metal sulfide to prepare a sulfide represented by the formula (7)

$$R^{1} - \left[X \right]_{D}^{O} CH_{2} - S - CH_{2}^{O} - \left[Y \right]_{C}^{C} R^{2}$$
 (7)

wherein R¹, R², X, Y, p and r, respectively, have the same meanings as defined above; and the third step of acting a thiocarbonyl reagent on the sulfide represented by the formula (7) for ring-closure, thereby preparing the compound of the formula (1) having a 1,4-dithiin ring

$$R^{1} - X \rightarrow p \left[\begin{array}{c} S \\ S \\ S \\ R^{4} \end{array} \right]_{q} R^{2}$$
 (1)

wherein R¹, R², X, Y, p and r, respectively, have the same meanings as defined above, R³ and R⁴ independently represent hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group, an organooxy group, an organoamino group, an organosilyl

Docket No.: 0171-1271PUS1

group, an organothio group, an acyl group or a sulfone group, two sulfur atoms contained in the dithiin ring may independently be in the form of an SO group or an SO_2 group, and q is an integer of 1 or over provided that $p + q + r \le 20$ is satisfied.

8. (Withdrawn) A method for preparing an acyl compound of the formula (5) or (6) indicated hereinbelow, comprising:

reacting, in the presence of an acid catalyst, a compound of the formula (2)

$$R^{1} - \left[X \right]_{p} H \qquad (2)$$

wherein R¹ represents hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group or an organooxy group, X represents at least one member of substituted or unsubstituted, divalent conjugated units selected from aniline, thiophene, furan, pyrrole, ethynylene, vinylene, phenylene, naphthalene, anthracene, imidazole, oxazole, oxadiazole, quinoline, quinoxaline, pyridine, pyrimidine, pyrazine, phenylenevinylene, fluorene, carbazole, triarylamine, metal or metal-free phthalocyanine, and metal or metal-free porphyrin, and p is 0 or an integer of 1 or over, or

the formula (3)

$$R^2 - \left[Y \right]_{\Gamma} H \qquad (3)$$

wherein R² represents hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group or an organooxy group, Y represents at least one member of substituted or unsubstituted, divalent conjugated units selected from aniline, thiophene, furan, pyrrole, ethynylene, vinylene, phenylene, naphthalene, anthracene, imidazole, oxazole, oxadiazole, quinoline, quinoxaline, pyridine, pyrimidine, pyrazine, phenylenevinylene, fluorene, carbazole, triarylamine, metal or metal-free phthalocyanine, and metal or metal-free porphyrin, and r is 0 or an integer of 1 or over, and an acid halide of the formula (4)

$$Hal^{1} CH_{2} - Hal^{2}$$
 (4)

wherein Hal represents a halogen atom, thereby preparing the acyl compound of either the formula (5)

$$R^{1} = \begin{bmatrix} X \end{bmatrix}_{p}^{0} CH_{2} - Hal^{2}$$
 (5)

wherein R¹, X, p and Hal, respectively, have the same meanings as defined above, or the formula (6)

$$R^{2} - \left[Y\right]_{r}^{O} - CH_{2} - Hal^{2}$$
 (6)

wherein R², X, r and Hal, respectively, have the same meanings as defined above.

9. (Withdrawn) The method for preparing an acyl compound according to claim 8, wherein said acid catalyst is made of ethyl aluminium dichloride or diethyl aluminium chloride.

10. (Withdrawn) A method for preparing a sulfide represented by the formula (7) indicated hereinbelow, comprising reacting the acyl compound represented by the formula (5), the acyl compound represented by the formula (6), both obtained in claim 8 or 9, and an alkali metal sulfide

$$R^{1} - \left[-X \right]_{D}^{O} CH_{2} - S - CH_{2} - \left[-Y \right]_{T}^{O} R^{2}$$
 (7)

wherein R¹, R², X, Y, p and r, respectively, have the same meanings as defined above.

11. (Withdrawn) A method for preparing a compound having a 1,4-dithiin ring and represented by the formula (1) indicated hereinbelow, comprising reacting a thiocarbonylizing reagent on the sulfide obtained in claim 10

and represented by the formula (7)

$$R^{1} - X - \frac{S}{p} \left[R^{3} - S - R^{4} \right]_{q} - Y - \frac{1}{r} R^{2}$$
 (1)

wherein R¹, R², X, Y, p and r, respectively, have the same meanings as defined above, and R³ and R⁴ independently represent hydrogen, a hydroxyl group, a halogen group, an amino group, a silanol group, a thiol group, a carboxyl group, a sulfonic acid group, a phosphoric acid group, a

Docket No.: 0171-1271PUS1

phosphoester group, an ester group, a thioester group, an amido group, a nitro group, a monovalent hydrocarbon group, an organooxy group, an organoamino group, an organosilyl group, an organothio group, an acyl group or a sulfone group, two sulfur atoms contained in the dithiin ring may independently be in the form of an SO group or an SO₂ group, and q is an integer of 1 or over provided that $p + q + r \le 20$ is satisfied.

- 12. (Previously Presented) The charge transport organic material according to claim 1, comprising 2,6-bis(2,2'-bithiophenyl)-1,4-dithiin.
- 13. (Previously Presented) A charge transport varnish comprising a charge transport organic material of claim 12 and a solvent.
- 14. (Previously Presented) A charge transport thin film prepared by use of the charge transport varnish defined in claim 13.
- 15. (Previously Presented) An organic electroluminescent element comprising the charge transport thin film defined in claim 14.